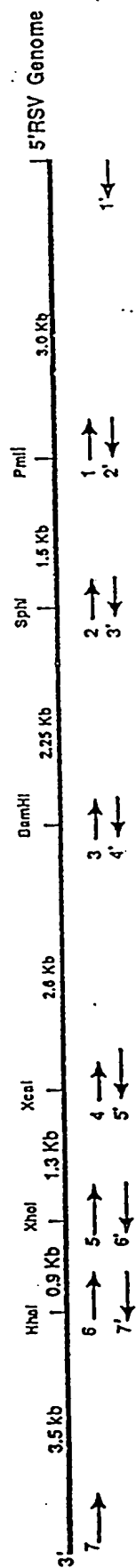


FIG. 1



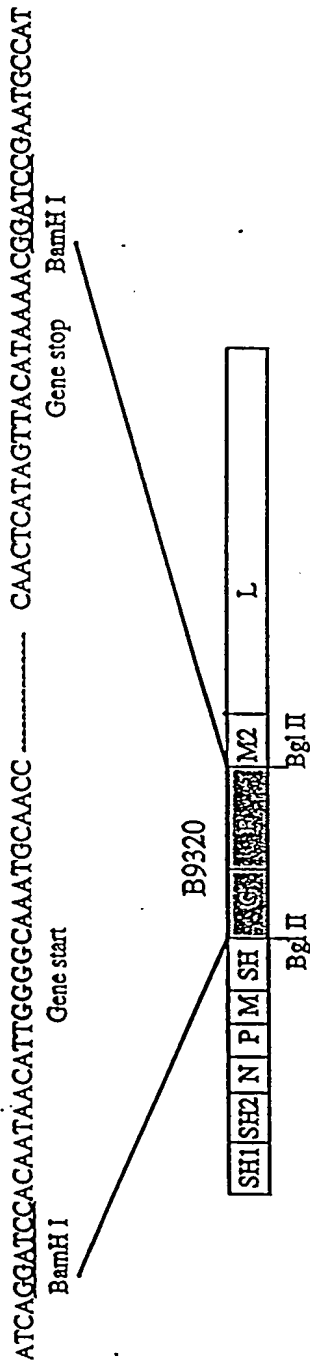


## Primer Sequences:

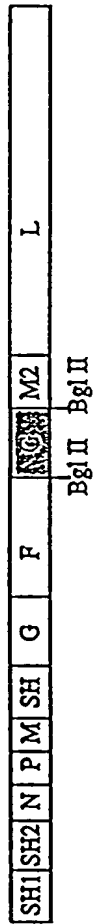
- 1: 5' GTTTAACACGTTGGTGAG  
 2: 5' ACATATAGGCATGCACC  
 3: 5' GACAAAATGGATCCCAT  
 4: 5' TGGTTGGTATACCAAGTGT  
 5: 5' TACCAAGAGCTCGAGTCA  
 6: 5' TTTACCATATGCGCTAATGT  
 7: 5' ACGCGAAAAAATGCGTACA  
 1': 5' ACGAGAAAAAAGTGTCAA  
 2': 5' CTCACCAACGTGTTAAAC  
 3': 5' GGTGCATGCCCTATATGT  
 4': 5' AATGGGATCCATTTTGTC  
 5': 5' AACACTGGTATACCAACCA  
 6': 5' TGA CTGAGCTCTTGGTA  
 7': 5' ACATTAGGCATATGGTAAA

FIG. 3

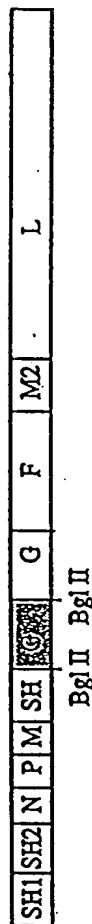
A. RSVB-GF



B. RSVB9320G-F/M2



C. RSVB9320G-SH/G



FIGS. 4A-C

002211 8854260

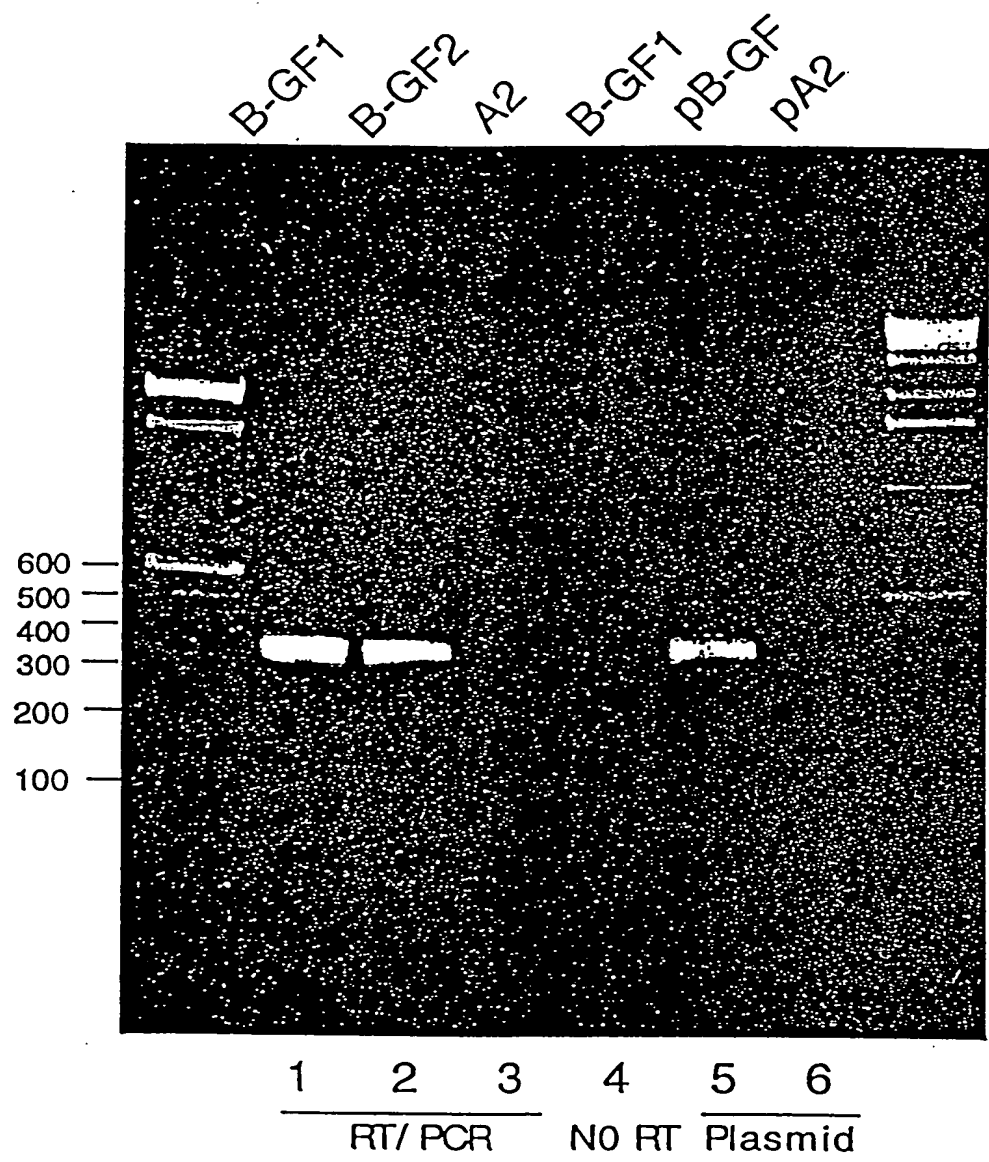


FIG. 5

**A.**

RT	+	-	+	-	A <sub>2</sub>	A <sub>2</sub> (B-G)	A <sub>2</sub> (B-G)	A <sub>2</sub>	ms
M	1	2	3	4	5	6	7	8	

Detailed description: This is a black and white photograph of a gel electrophoresis result. The gel has 9 lanes. Lane 1 (M) contains a DNA ladder with multiple bands of varying sizes. Lanes 2-4 show bands for samples 1, 2, and 3. Lane 2 has a single prominent band. Lane 3 has a single prominent band. Lane 4 has a single prominent band. Lanes 5-8 show bands for samples 4, 5, 6, and 7. Lane 5 has a single prominent band. Lane 6 has a single prominent band. Lane 7 has a single prominent band. Lane 8 has a single prominent band. Lane 9 (ms) is a marker lane with multiple bands. The labels at the bottom of the gel are: M, 1, 2, 3, 4, 5, 6, 7, 8, 9. The labels on the right side of the gel are: +, -, +, -, A<sub>2</sub>, A<sub>2</sub>(B-G), A<sub>2</sub>(B-G), A<sub>2</sub>, ms. The label 'A.' is at the top left.

**FIGS. 6A-B**

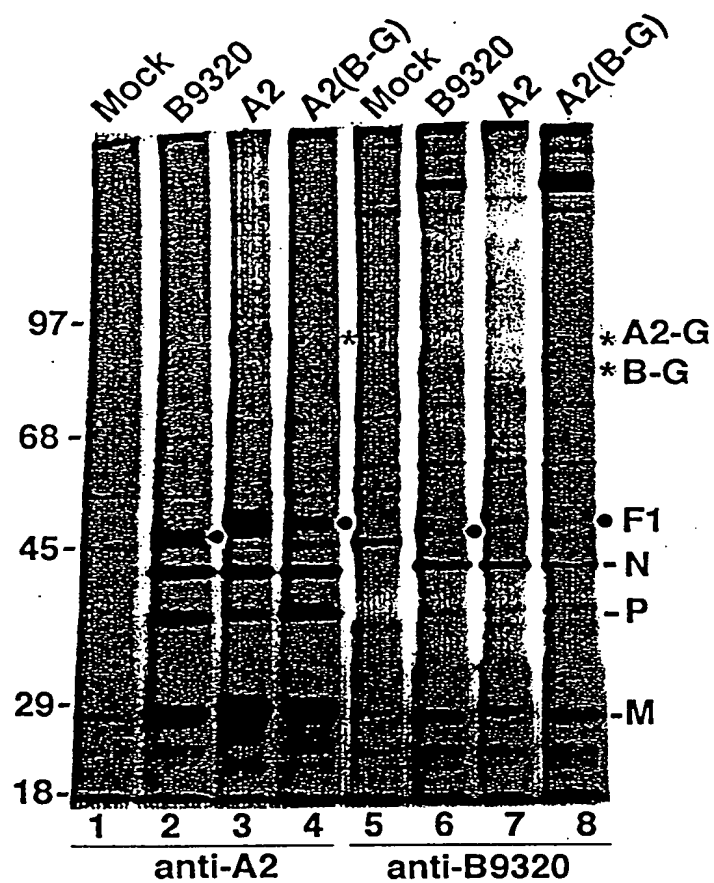


FIG. 7

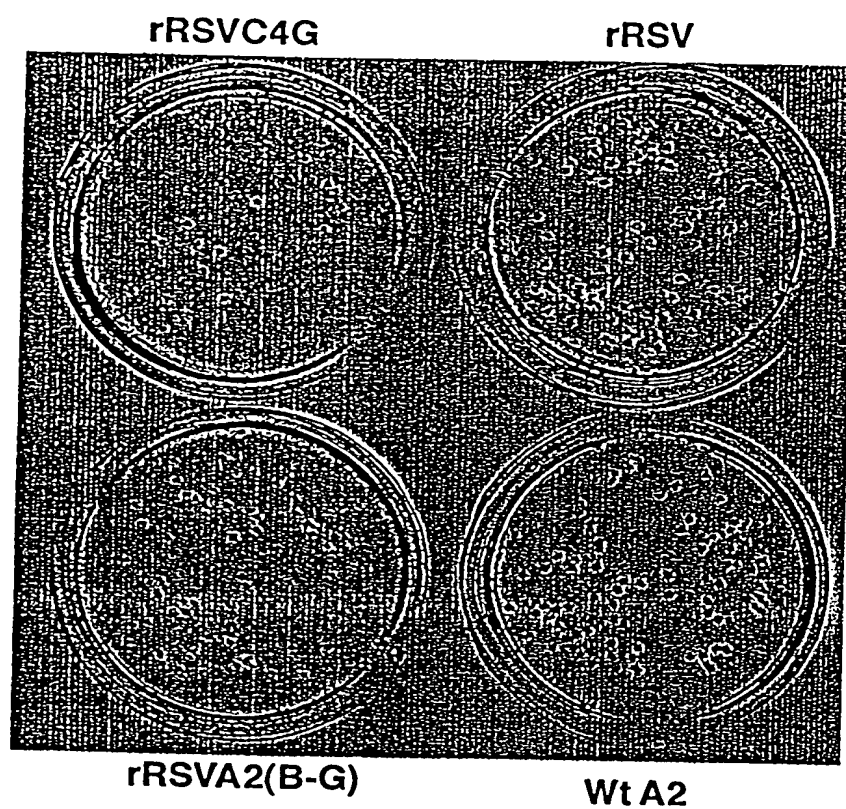


FIG. 8



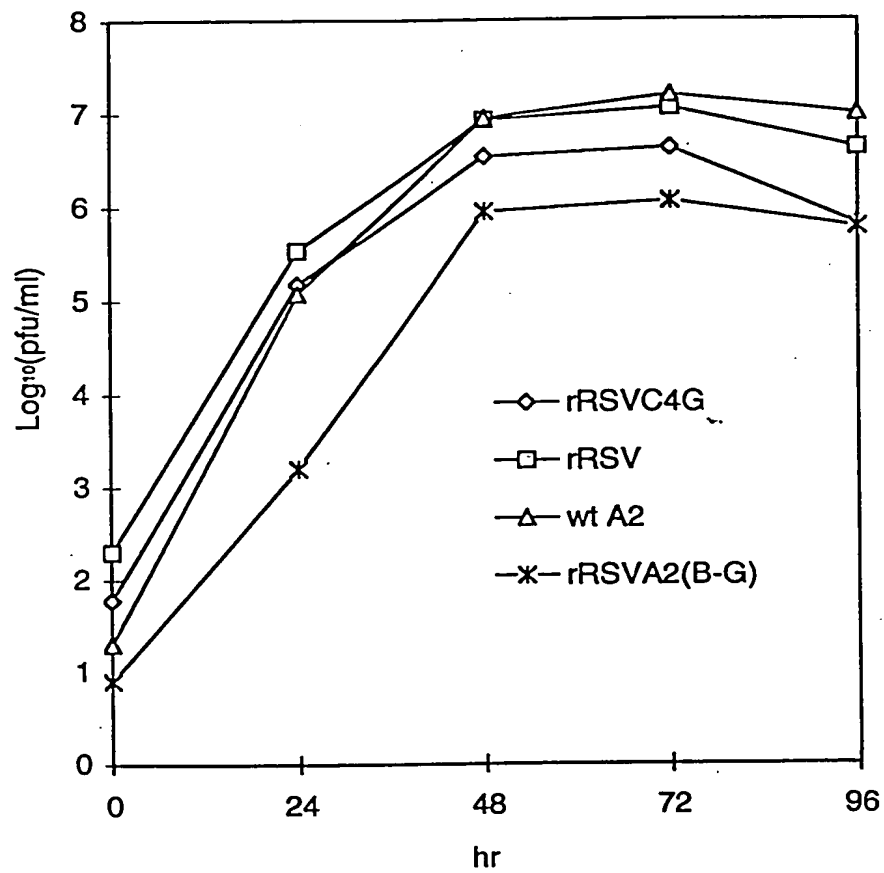


FIG. 9

Charged. Clusters (Amino Acids that are underlined were changed to alanines)  
Mutations in cpts-248/404  
Mutation in cpts530

**FIG. 10**

MDPIINGNSANVILT DSYLKGVISFSECNA LGSYIFNGPYLKNDY TNLISRQNPLIEHNN LKKLNTQSLISKYH 75  
 KGEIKLEEPTVFQSL LMTYKSMTSSEQIAT TNLKKIIRRAIEIS DVKVYAILNKLGLKE KDKIKSNNGQDEDNS 150  
 VITTIKDDILSAVK DNQSHLKADKNHSTK QKDTIKTTLLKKLMC SMQHPPSWLIHWENL YTKLNNILTQYRSNE 225  
 VKNHGFTLIDNQTLG GFQFILNQYGCIVYH KELKRITVTVNQFL TWKDISLSRLNVCLI TWISNCLNTLNKSLG 300  
 LRCGFNNVILTQLEL YGDCILKLFHNEGFI IIEKEVEGFIMSLILN ITEEDQFRKRFRYNSM LNNITDAANKAQKNL 375  
 LSRVCHTLDDKTVDSD NIINGRWIILLKSKFL KLIKLAGDNNILNLS ELYFLFRIFGHPMVD ERQAMDAVKINQNET 450  
 KFYLLSSLSMLRGAF IYRIIKGFVNNYNRW PTLRNAIVLPLRWLT YKLNTPYPSLLELTE RDLIVLSGLRFYREF 525  
 RLPKKVDLEMIINDK AISPPKNLIWTSFPR NYMPSHIQNYIEHEK LKFSESDKSRRVLEY YLRDNKFNECDLYNC 600  
 VVNQSYIANNPNHVVS LTGKERELSVGRMFA MQPGMFRQVQIIAEK MIAENILQFFPESLT RYGDLELQKILEKA 675  
 GISNKSNNRYNDNNYN YISKCSIITDLSKFN QAFRYETSCICSDVL DELHGVQSLFSLWHL TIPHVTIICTYRHAP 750  
 PYIGDHIVDLNNVDE QSGLYRYHMGGIEGW CQKLWITIEAISLLDL ISLKGKFSITALING DNQSIDISKPIRLME 825  
 GQTHAQADYLLALNS LKLLYKEYAGIGHKL KGTETYISRDMQFMS KTIQHNGVYYPASIK KVLRVGPWINTILDD 900  
 FKVSLESIGSLTQEL EYRGESLLQSLIFRN VWLYNQIALQKKNHA LCNNKLYLDIILKVLK HLKTFNLDNIDTAL 975  
 TLYNNLPMFLGGGDP NLLYRSFYRRTPDFL TEAIVHSVFILSYTT NHDLKDKLQDLSDDR LNKFLTCTITFDKNP 1050  
 NAEFVTLMRDPQALG SERQAKITSEINRLA VTEVLSTAPNKIFSK SAQHYTTTEIDLNDI MQNIEPTYPHGLRVW 1125  
 YESLPFYKAEKIVNL ISGTSITNILEKTS AIDLTDIDRATMMMR KNITLLIRILPLDQN RDKREILSMENLSIT 1200  
 ELSKYVRERSWSLSN IVGVTSPSIMYTMDI KYTTSTISSGIIIEK YNVNSLTRGERGPTK PWVGSSTQEKKTMPIV 1275  
 YNRQVLTKKQDQID LLAKLDWVYASIDNK DEFMEELSIGTLGLT YEKAKKLFPPQYLSVN YLHRLTVSSRPQEFPP 1350  
 ASIPAYRTTNYHFDI SPINRILTEKYGDED IDIVFQNCISFGLSL MSVVEQFTNVCPNRI ILIPKLINEIHLKPP 1425  
 IFTGDVDIHLKQVI QKQMFPLPKISLTQ YVELFSLNKTLSGS HVNSNLILAHKISDY FHNTYILSTNLAGHW 1500  
 ILIIQLMKDSKGIFE KDWGEGYITDHFMIN LKVVFFNAYKTYLLCF HKGYGKAKLECDMNT SDLLCVLELIDSSYW 1575  
 KSMKVFLQKVIKY ILSQDASLHRVKGQH SEKLWFLKRLNVAEF TVCPWVNVNIDYHPTH MKAILTYIDLVRMGL 1650  
 INIDRIHIKNGHKN DEFYTSNLFYINYNF SDNTHLLTKHIRIAN SELENNYNKLYHPTP ETLENILANPIKSN 1725  
 KKTINDYCIGKNVDS IMLPLLSNKKLIKSS AMIRTNYSKQDLYNL FPMVVIDRIIDHSGN TAKSNQLYTTTSHQI 1800  
 SLVHNSTSLYCMLPW HHINRFNFVFSSTGC KISIEYILKDLKID PNCLAFIGEGAGNLL LRTVVELHPDIRYIY 1875  
 RSLKDCNDHSLPTEF LRLVNGHINIDYGEN LTIPATDATNNIHS YLHIKFAEPISLFCV DAELSVTNVNSKII 1950  
 EWSKHVRKCKYCQSSV NKCMLIVKYHAQDDI DFKLDNITILKTYVC LGSKLKGSEVYLVLT IGPANIFFVFNQV 2025  
 AKLILSRQKNFIMPK KADKESIDANIKSLI PFLCYPITKKGINTA LSKLSVSVSGDILSY SIAGRNEVFSNKLIN 2100  
 HKHNMILKWFNFHVLN FRSTELNYNHLYMVE STYPYLSELNLSLT NELKKLIKITGSLLY NFHNE 2165

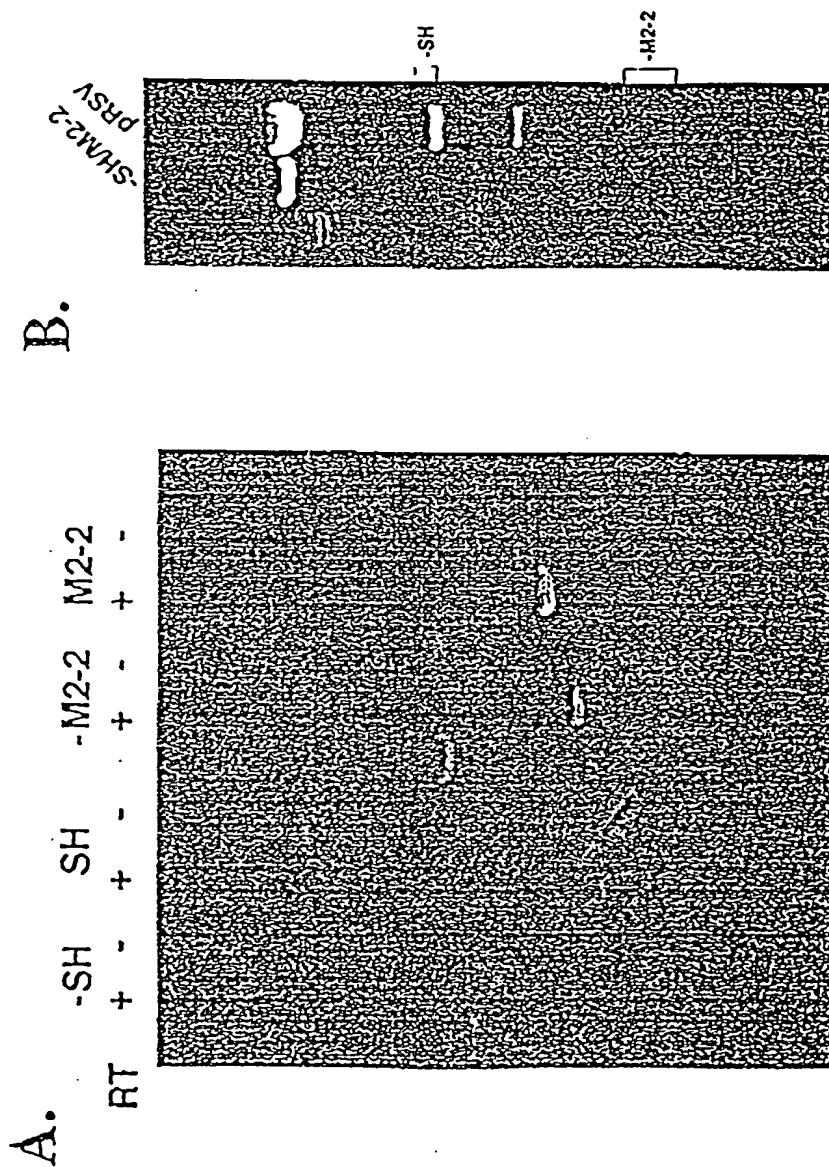
C Cysteine residues

C Cysteine residues that were changed to valine or aspartic acid

C Cysteine residue deleted

FIG. 11

008211" 88542260



FIGS. 12A-B